

Patent claims

1. A structural element (1), in particular cross member for arranging between A-pillars of a motor vehicle, with a basic body (2) which is essentially designed as a hollow profile and is provided on the inside with a plastic core (4) forming at least one duct (6), the basic body (2) being designed such that it is at least partially perforated.
2. The structural element as claimed in claim 1, the basic body (2) being designed such that it is perforated at least in an opening region (8a), in particular in the region in which a flow exit.
3. The structural element as claimed in claim 1 or 2, the basic body (2) being formed from sheet metal, in particular from steel sheet or light sheet metal.
4. The structural element as claimed in one of claims 1 to 3, the perforation of the basic body (2) being formed from perforated sheet metal and/or a wire mesh and/or an expanded metal.
5. The structural element as claimed in one of claims 1 to 4, the basic body (2) being formed from two half bodies (2a, 2b), in particular from two half shells.
6. The structural element as claimed in one of claims 1 to 5, the basic body (2), in particular its two half bodies (2a, 2b), being held together via the plastic core (4).
7. The structural element as claimed in claim 5 or 6, the two half bodies (2a, 2b) additionally being connected mechanically.

8. The structural element as claimed in one of claims 5 to 7, the basic body (2) being perforated in one opening region (8a) per half body (2a, 2b).

5 9. The structural element as claimed in one of claims 5 to 8, the basic body (2) being perforated in an opening region (8a) engaging over both half bodies (2a, 2b).

10 10. The structural element as claimed in claim 9, the opening region (8a), in the case of it being provided with a perforation engaging over the half bodies (2a, 2b), being provided with a reinforcing element (10).

15 11. The structural element as claimed in claim 10, the reinforcing element (10) being arranged parallel to the plane of separation of the half bodies (2a, 2b).

20 12. The structural element as claimed in one of claims 1 to 11, the basic body (2) being provided with a plurality of opening regions (8a to 8f) which are arranged at a distance from one another, as seen in the longitudinal direction.

25 13. The structural element as claimed in one of claims 1 to 12, the duct (6) being designed as a multichamber duct.

30 14. The structural element as claimed in one of claims 1 to 13, with securing means, connecting points or housing parts (12) of a heating and/or air-conditioning system being integrally formed on the edges (R), which bear against each other, of the half bodies (2a, 2b) and/or on the basic body (2).

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15. Use of a structural element as claimed in one of claims 1 to 14 as an instrument panel support in a motor vehicle, the duct (6) being an air conduction

duct and/or a cable duct.

16. The use of a structural element as claimed in one of claims 1 to 14 as a cross member, which is arranged
5 below a windshield, in a motor vehicle, the duct (6) being an air conduction duct for conducting an air flow to be supplied to the windshield and/or the side windows, and/or for heating a wiper blade support.
- 10 17. A method for producing a structural element as claimed in one of claims 1 to 14, the basic body (2) being at least partially perforated and being formed into a basic shape and being placed into a die in which the plastic core (4) is integrally formed on the basic
15 body (2), for example is injection-molded on, in a single method step.